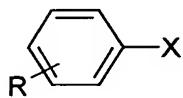


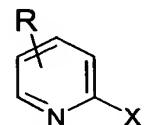
We claim:

1. A process for preparation of an arylamine comprising reacting a haloarene with an aromatic amine or a heterocyclic amine, the reaction being conducted in the presence of a catalyst comprising a copper compound, a ligand comprising a bidentate tertiary phosphorous compound, a base and a solvent.
2. A process as claimed in claim 1 wherein the haloarene has one halide radical and is represented by the formula Ar-X, wherein Ar represents an aromatic residue and X is selected from the group consisting of I, Br and Cl.
3. A process as claimed in claim 2 wherein the aromatic residue comprises a aromatic hydrocarbon aromatic selected from the group consisting of benzene, biphenyl, naphthalene and anthracene.
4. A process as claimed in claim 2 wherein the aromatic residue comprises a nitrogen containing aromatic selected from the group consisting of pyridine, bipyridine, and phenanthroline.
5. A process as claimed in claim 1 wherein the haloarene is of the formula



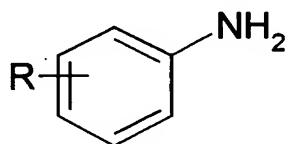
wherein R= H, alkyl, aryl, -OH, -OCH₃ and X= I, Br, Cl.

6. A process as claimed in claim 1 wherein the haloarene is of the formula

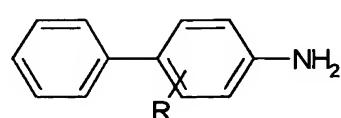


wherein X= I, Br, Cl; R= H, alkyl, aryl, -OH, -OCH₃

7. A process as claimed in claim 1 wherein the aryl amine is of the formula Ar-NH₂ wherein Ar represented an aromatic residue selected from the group consisting of benzene, biphenyl and naphthalene.
8. A process as claimed in claim 1 wherein the heterocyclic amine is selected from the group consisting of pyridine, piperazine and morpholine.
9. A process as claimed in claim 1 wherein the amine compound is selected from the group consisting of compounds of the following formulae

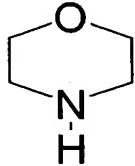


Formula 3



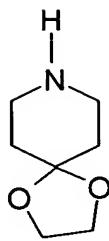
Formula 4

wherein R= H, alkyl, aryl, -OH.



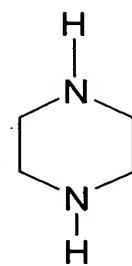
Formula 5

Morpholine



Formula 6

1,4-dioxa-8-azaspri- [4.5] decane



Formula 7

piperazine

10. A process as claimed in claim 1 wherein the solvent comprises a liquid that remains inert under the reaction conditions.
11. A process as claimed in claim 10 wherein the solvent is selected from the group consisting of cyclohexane, toluene, benzene, 1,4-dioxane, t-butanol, N-methylpyrrolidone, acetonitrile and Tetrahydrofuran.
12. A process as claimed in claim 1 wherein the copper compound is a copper complex with copper being in zero state or higher oxidation states.
13. A process as claimed in claim 1 wherein the copper compound comprises a copper salt of an inorganic acid is selected from the group consisting of bromide, iodide, chloride, perchlorate.
14. A process as claimed in claim 1 wherein the copper salt is selected from the group consisting of CuI, CuBr, CuCl, Cu(II)Br, CuOt-Bu, Cu(II)CO₃, and Cu(OAC)₂.
15. A process as claimed in claim 1 wherein the bidentate diphosphine ligand is selected from the group consisting of Ph₂P-CH₂-PPh₂ [Bis (diphenylphosphino)methane (DPPM)], Ph₂P-CH=CH-PPh₂ [Cis1,2 Bis (diphenylphosphino)ethylene (DPPE)], Ph₂P-(CH₂)₃-PPh₂ [1,3-bis(diphenylphosphino)propane (DPPP)], Ph₂P-(CH₂)₄-PPh₂ [1,4-bis(diphenylphosphino)butane (DPPB)], Ph₂P-(CH₂)₅-PPh₂ [1,5-bis(diphenylphosphino)pentane (DPPT)] and Ph₂P-(CH₂)₆-PPh₂ [1,6-bis(diphenylphosphino)hexane (DPPH)].
16. A process as claimed in claim 1 wherein the ligand to metal mole ratio is in the range of 0.1 to 10.
17. A process as claimed in claim 16 wherein the ligand to metal mole ratio is in the range of 0.5 - 2.
18. A process as claimed in claim 1 wherein the amount of catalyst is in the range of 0.00001 to 1 molar equivalent with respect to the arylamine component added.

19. A process as claimed in claim 18 wherein the amount of catalyst is in the range of 0.001 to 1 mol with respect to the arylamine component added.
20. A process as claimed in claim 1 wherein the base is selected from the group consisting of KOt-Bu, NaOt-Bu, KOH, NaOH, K₂CO₃, Cs₂CO₃, NaOMe, TEA, tri-t-butylamine, NaHCO₃, 1,8-Diazabicyclo[5.4.0] undec-7-ene (DBU); 1,5-Diazabicyclo[2.2.0] non-5-ene (DBN); 1,4-Diazabicyclo[2.2.2] octane (DABCO) 1,5-Diazabicyclo[4.3.0] none-5-ene and N,N-Dimethylbenzylamine.
21. A process as claimed in claim 1 wherein the base is used in an amount sufficient to quench the halide from aryl halide or in excess.
22. A process as claimed in claim 1 wherein the temperature of the reaction in the range of 50-200°C.
23. A process as claimed in claim 1 wherein the temperature of the reaction in the range of 100 to 140° C.
24. A process as claimed in claim 1 wherein the temperature of the reaction in the range of 0.1 to 100 hours.
25. A process as claimed in claim 1 wherein the haloarene is iodobenzene
26. A process as claimed in claim 1 wherein the base is selected from KOt-Bu and NaOt-Bu.
27. A process as claimed in claim 1 wherein the catalyst comprises a Cu (I) or Cu (II) salt or a copper complex with bidentate phosphorous ligand.
28. A process as claimed in claim 1 wherein the bidentate phosphine compound used is selected from the group consisting of 1,1-Bis(diphenylphosphino)methane, Cis1,2 Bis (diphenylphoshino)ethylene, 1,2-bis (diphenylphosphino) ethane, 1,3-bis(diphenylphosphino) propane, 1,4--bis(diphenylphosphino)butane, 1,5--bis(diphenylphosphino)pentane and 1,6-bis(diphenylphosphino)hexane (DPPH).
29. A process as claimed in claim 1 wherein the solvent is selected from toluene and xylene.